



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/840,099	05/06/2004	Shu Chen Huang	2002.0960/1085.93	7294
54657	7590	04/03/2006	EXAMINER	
DUANE MORRIS LLP IP DEPARTMENT (TSMC) 30 SOUTH 17TH STREET PHILADELPHIA, PA 19103-4196			NGUYEN, THINH T	
			ART UNIT	PAPER NUMBER
			2818	

DATE MAILED: 04/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/840,099

Applicant(s)

HUANG ET AL.

Examiner

Thinh T. Nguyen

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7 and 8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 7 is/are rejected.
- 7) ☒ Claim(s) 4 and 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED OFFICE ACTION

1. Applicant's election of claims 1-5,7-8 for prosecution without traverse in the communication with the Office on 3/17/2006 is acknowledged.

Specification

2. The specification has been checked to the extent necessary to determine the presence of all possible minor errors. However, the applicant cooperation is requested in correcting any errors of which the applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(b) that form the basis for the rejections under this section made in this office action.

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1, 3, 5,7 are rejected under 35 U.S.C. 102(b) as being anticipated by Hohkibara et al. (U.S. Patent 6,438,436).

REGARDING CLAIM 1

Hohkibara discloses (the abstract ,fig 3, fig 4,fig 5,fig 7, fig 10,fig 13) a method for generating a work in progress (WIP) schedule (the abstract, line 16) in a semiconductor manufacturing facility (column 1 line 21) , the method comprising: determining starting and ending dates (fig 4) of a predetermined schedule period for generating the WIP schedule; determining remaining days for completing at least one wafer lot associated with a predetermined product from the starting date(fig 3 module 111,113, 1140 fig 7; determining a starting process stage for the wafer lot at the beginning of the starting date based on the remaining days (fig 4) ; determining an ending process stage for the wafer lot at the end of the ending date (fig 3 module 117,116, fig 5); identifying all stages between the starting and the ending process stages; assigning wafer numbers (fig 3 module 114,module 113) to each process stage of the schedule time in proportion to a process time of each stage in view of a total process time for the schedule period (fig 5) ; and repeating the above steps for one or more other wafer lots under production to determine a total wafer number assigned to each stage (fig 3, module 111,113,114,116) , thereby constructing the WIP schedule for the schedule period (the abstract line 16) , wherein at least one of the above steps is performed through a computing device.(fig 13) .

REGARDING CLAIM 3

Hohkibara discloses (the abstract ,fig 3, fig 4,fig 5, fig 7, fig 10,fig 13) a method for generating work in progress (WIP) schedule wherein determining a starting process stage includes: identifying a process time for each process stage to complete the wafer lot; identifying a remaining process time line indicating remaining time for completing the wafer lot; (fig 5) and identifying the starting process stage along the remaining process time line based on the

Art Unit: 2818

determined remaining days and a total process time for completing the wafer lot (fig 3 module 123,124,121, fig 4,fig 7,fig 10).

REGARDING CLAIM 5

Hohkibara discloses (the abstract ,fig 3, fig 4,fig 5, fig 7, fig 10,fig 13) a method for generating work in progress (WIP) schedule that comprises generating one or more WIP schedules for one or more additional products for one or more process stages (fig 3 module 114,115,117, fig 5) . noted that Hohkibara processes (column 6 line 36-47) are designed for a plurality of lots.

REGARDING CLAIM 7

Hohkibara discloses (the abstract ,fig 3, fig 4,fig 5, fig 7, fig 10,fig 13) a method for generating work in progress (WIP) schedule (fig 5, fig 4, fig 3 module 111,113,114,116,117, fig 7, fig 10) wherein determining a starting process stage further includes: identifying a process time for each process stage to complete the wafer lot; identifying a remaining process time line indicating remaining time for completing the wafer lot; and identifying the starting process stage along the remaining process time line based on the determined remaining days and a total process time for completing the wafer lot.

Claim Rejections - 35 USC § 103

5. The following is a quotation of U.S.C. 103(a) which form the basis for all obviousness rejections set forth in this office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art

Art Unit: 2818

are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hohkibara et al. (U.S. Patent 6,438,436) .

REGARDING CLAIM 2

With regard to claim 2, as discussed in the rejection of claim 1, Hohkibara disclosed all the invention except a schedule wherein the starting date and the end date are the same (daily schedule) . It would have been obvious to one of ordinary skill in the art the time the invention was made for the to have the Hohkibara a schedule wherein the starting date and the end date are the same (daily schedule) since it has been held that the provision of adjustability (in the instant case , modifying the short range scheduling unit by Hohkibara to be a daily schedule) , when needed, involves only routine skill in the art.

ALLOWABLE SUBJECT MATTER

7. Claims 4,8 are objected as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claim.

Claim 4,8 are considered allowable since the prior fails to teach a method for generating work in progress scheduling with the steps:

-- " identifying the starting process stage further includes:

scaling the remaining days by a cycle time factor to obtain a time point; and
determining the starting process stage by identifying the time point along the remaining
process time line. “--

and all other limitations of claim 4 and claim 8

8. When responding to the office action, Applicants are advised to provide the examiner with the line numbers and the page numbers in the application and/or references cited to assist the examiner to locate the appropriate paragraphs.

9. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) day from the day of this letter. Failure to respond within the period for response will cause the application to be abandoned (see M.P.E.P. 710.02(b)).

CONCLUSION

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thinh T Nguyen whose telephone number is 571-272-1790.

The examiner can normally be reached on Monday-Friday 9:30am-6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached at 571-272-1787.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2818

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval [PAIR] system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thinh T. Nguyen



Art Unit 2818



David Nelms
Supervisory Patent Examiner
Technology Center 2800